



**ADOPTED**

BOARD OF SUPERVISORS  
COUNTY OF LOS ANGELES

20 February 23, 2016

*Patrick Ogawa*  
PATRICK OGAWA  
ACTING EXECUTIVE OFFICER

Los Angeles County  
Board of Supervisors

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First District

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Second District

Sheila Kuehl  
Third District

Don Knabe  
Fourth District

Michael D. Antonovich  
Fifth District

February 16, 2016

The Honorable Board of Supervisors  
County of Los Angeles  
383 Kenneth Hahn Hall of Administration  
500 West Temple Street  
Los Angeles, California 90012

Dear Supervisors:

**AUTHORIZE THE SOLICITATION AND ACQUISITION OF CONVERGE  
SERVER VIRTUALIZATION INFRASTRUCTURE HARDWARE AND  
SOFTWARE FOR THE DEPARTMENT OF HEALTH SERVICES DATA  
CENTER  
(ALL SUPERVISORIAL DISTRICTS)  
(3 VOTES)**

**CIO RECOMMENDATION: APPROVE (X) APPROVE WITH MODIFICATION ( )  
DISAPPROVE ( )**

**SUBJECT**

Authorize the solicitation and acquisition of Converge Server Virtualization Infrastructure hardware, software, and professional services with a purchase cost in excess of \$250,000 for Department of Health Services Enterprise Internal Cloud solution (Phase 1).

**IT IS RECOMMENDED THAT THE BOARD:**

Authorize the Internal Services Department (ISD), as the County's Purchasing Agent, to proceed with the solicitation and acquisition of Converge Server Virtualization Infrastructure (Phase 1) hardware, software, and professional services, some items of which have a unit cost in excess of \$250,000 in capital assets, for all Department of Health Services (DHS) servers hosted at Martin Luther King (MLK) Data Center, with a total cost of \$1,035,979.74.

Mitchell H. Katz, M.D.  
Director  
Hal F. Yee, Jr., M.D., Ph.D.  
Chief Medical Officer  
Christina R. Ghaly, M.D.  
Deputy Director, Strategy and Operations

313 N. Figueroa Street, Suite 912  
Los Angeles, CA 90012

Tel: (213) 240-8101  
Fax: (213) 481-0503

[www.dhs.lacounty.gov](http://www.dhs.lacounty.gov)

*To ensure access to high-quality, patient-centered, cost-effective health care to Los Angeles County residents through direct services at DHS facilities and through collaboration with community and university partners.*



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## **PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION**

Approval of this action will allow for the solicitation and acquisition of Converge Server Virtualization hardware, software, and professional services for DHS servers hosted at the MLK Data Center, including support, configuration, installation, testing, five (5) year warranty, and five (5) years of maintenance. The current DHS Server Virtualization infrastructure (Server Vblock) has reached the size and design capacity limits due to rapidly growing server virtual workload demands within DHS.

The DHS Converge Server Virtualization platform will support Information Technology (IT) enterprise mission critical server virtual workloads consolidated at the MLK Data Center. The equipment enables DHS to maintain Health Insurance Portability and Accountability Act requirements associated with patient and clinical records retention supporting all DHS business and Hospital IT operations. This acquisition is Phase 1 in DHS' ongoing project to maintain the integrity of the DHS Centralized Data Center environment systems and services. This effort is part of DHS' consolidation strategy of various systems. The Converge Server Virtualization hardware and software are needed to: 1) replace end-of-life Server Vblock solution and provide DHS with a modern Converge Server Virtualization platform that is highly optimized, flexible and scalable to empower IT to react faster to business needs; 2) enable DHS to consolidate multiple virtual and physical environments onto a shared server virtualization infrastructure to yield additional economies of scale savings inherent in sharing converge infrastructure for server virtualization; and 3) provide for future growth, as needs increase, as the hardware will include sufficient data and computing capacity to meet DHS' current needs.

In addition, replacing its current clinical information systems (Vision Share, Patient Referral System and Electronic Data Repository) requires virtual hardware (server) upgrades. As a result, some of the current hardware (legacy server) will be replaced with new virtual hardware. These efforts are part of DHS' goal of standardizing server images across DHS facilities.

## **Implementation of Strategic Plan Goals**

The recommended action will support Goal 1, Operational Effectiveness/Fiscal Sustainability, of the County's Strategic Plan.

## **FISCAL IMPACT/FINANCING**

The total one-time estimated net cost of the hardware and software is \$1,035,979.74 for this Phase 1 acquisition and includes professional services, five (5) year warranty, and five (5) years maintenance. The details comprising the estimated total costs are shown in Attachment II.

Funding is included in DHS' Fiscal Year (FY) 2015-16 Final Budget.

## **FACTS AND PROVISIONS/LEGAL REQUIREMENTS**

On October 16, 2001, the Board approved the classification categories for fixed assets and new requirements for major fixed assets (now referred to as capital assets) purchases requiring County departments to obtain Board approval to purchase or finance equipment with a unit cost of \$250,000 or greater prior to submitting their requisition to ISD.

The County's Chief Information Officer recommends approval of this purchase and that Office's

Analysis is attached (Attachment I).

**CONTRACTING PROCESS**

This is a commodity purchase under the statutory authority of the County's Purchasing Agent. This acquisition will be competitively bid by the County's Purchasing Agent in accordance with County Purchasing Policies and Procedures established by ISD.

**IMPACT ON CURRENT SERVICES (OR PROJECTS)**

Approval of the recommendation will enable continued implementation of DHS' various systems consolidation strategies.

Respectfully submitted,



Mitchell H. Katz, M.D.  
Director

Reviewed by:  


RICHARD SANCHEZ  
Chief Information Officer

MHK:RS:hs

Enclosures

c: Chief Executive Office  
County Counsel  
Executive Office, Board of Supervisors  
Internal Services Department



RICHARD SANCHEZ  
CHIEF INFORMATION OFFICER

Office of the CIO  
**CIO Analysis**

NUMBER:  
**CA16-01**

DATE:  
02/17/2016

SUBJECT:

**AUTHORIZE THE SOLICITATION AND ACQUISITION OF CONVERGE SERVER VIRTUALIZATION INFRASTRUCTURE HARDWARE AND SOFTWARE FOR THE DEPARTMENT OF HEALTH SERVICES DATA CENTER**

RECOMMENDATION:

Approve                       Approve with Modification                       Disapprove

CONTRACT TYPE:

New Contract                       Sole Source  
 Amendment to Agreement                       Other:

CONTRACT COMPONENTS:

Software                       Hardware  
 Telecommunications                       Professional Services

SUMMARY:

Department Executive Sponsor: **Mitchell H. Katz, M.D., Director, Department of Health Services**

**Description:** Authorize the Internal Services Department (ISD), as the County’s Purchasing Agent, to proceed with the solicitation and acquisition of Server Virtualization Infrastructure hardware, software, and services for the Department of Health Services (DHS) Martin Luther King (MLK) Data Center (DC), with a cost of \$1,035,979.74.

Contract Amount: \$1,035,979.74                      Funding Source: Fiscal Year (FY) 2015-16 Final Budget

Legislative or Regulatory Mandate                       Subvened/Grant Funded: N/A

**Strategic and Business Analysis**

PROJECT GOALS AND OBJECTIVES:

The Converge Server Virtualization hardware and software are needed to:

- 1) Reach a fully virtualized state to enable DHS the economies of scale and savings in line with County directions. This will enhance DHS’ internal cloud services;
- 2) Replace end-of-life Server Vblock solution and provide DHS with a modern Converge Server Virtualization platform;
- 3) Enable DHS to combine multiple virtual and physical environments to yield further consolidation; and
- 4) Provide enough capacity for approximately 30% future growth.

**BUSINESS DRIVERS:**

This is Phase 1, of 2, equipment and software solicitation and acquisitions in DHS' ongoing project to maintain the integrity of the DHS centralized DC environment, systems and services. This is also in support of the Electronic Health Record (EHR) System known as the Online Real-Time Centralized Health Information Database (ORCHID).

In the July timeframe DHS plans to issue another Board letter requesting approval to proceed with Phase 2 of this DC centralization modernization project.

**PROJECT ORGANIZATION:**

The project will be managed by Enrique Garcia, Associate, Chief Information Systems, and Brenny Ortega, Information Technology Manager II. A team of six members, one from each facility, has been formed to lead this effort throughout DHS. A detailed project structure that includes DHS and vendor resources is in place. An estimated 25-member team between DHS and vendors will continue to be committed to ensure successful implementation of this project.

**PERFORMANCE METRICS:**

This project will be measured on the following success criteria: VM server deployment time will be reduced to approximately four hours versus three days. There will be no degradation of response time from applications. Response times are expected to improve because of optimization on the newer storage array.

**STRATEGIC AND BUSINESS ALIGNMENT:**

Converge Server Virtualization Infrastructure supports Goal 1, Operational Effectiveness/Fiscal Sustainability of the County's Strategic Plan.

**PROJECT APPROACH:**

This project will include the following two phases:

**Phase 1 (April 2016 – June 2016).** The first project phase is to replace the existing virtualization servers located at the MLK DC and to consolidate four Storage Area Network devices at LAC+USC. This will establish a Converge Server Virtualization platform and support the deployment of the DHS Enterprise Internal Cloud solution.

**Phase 2 (September 2016 – December 2016).** This Phase will provide failover capability of the mission critical server virtual workloads between the two main DHS DCs at LAC+USC and MLK facilities. This will ensure business continuity by protecting mission critical server virtual workloads from local DC outage.

	<p><b>ALTERNATIVES ANALYZED:</b></p> <p>There will be two competitive bid procurement requests to be issued by ISD’s Purchasing Agent. The first request will be a commodity purchase under the statutory authority of the County’s Purchasing Agent to replace the end of life Server Virtualization Infrastructure. DHS intends to proceed with existing technology vendors. The second acquisition will also be through a competitive bid process in accordance with County Purchasing Policies and Procedures for new storage technology.</p>																
<p><b>Technical Analysis</b></p>	<p><b>ANALYSIS OF PROPOSED IT SOLUTION:</b></p> <p>This refresh hardware and software will provide the infrastructure to support about 630 virtual machine workloads and allow for an additional 30 percent growth between DHS Administrative and Clinical facilities. Server virtualization will enable centralized hardware management, operating systems (OS) and applications within DHS main DCs (LAC+USC and MLK), thereby reducing ongoing operating costs; leveraging shared resources for server workloads; improving security of OS and applications by centralizing management of approved OS, applications, user permissions, and enabling automation of manual systems administration tasks.</p>																
<p><b>Financial Analysis</b></p>	<p><b>BUDGET:</b></p> <p><b>Costs:</b></p> <table border="0" style="width: 100%;"> <tr> <td colspan="2"><b>Phase 1 (FY 2015-16)</b></td> </tr> <tr> <td>Hardware.....</td> <td style="text-align: right;">\$ 618,747.12</td> </tr> <tr> <td>Software.....</td> <td style="text-align: right;">\$ 30,411.04</td> </tr> <tr> <td>Hardware Maintenance (5 years).....</td> <td style="text-align: right;">\$ 185,700.60</td> </tr> <tr> <td>Software Maintenance (5 years).....</td> <td style="text-align: right;">\$ 32,340.00</td> </tr> <tr> <td>Professional Services .....</td> <td style="text-align: right;">\$ 110,000.00</td> </tr> <tr> <td>Sales Tax .....</td> <td style="text-align: right;">\$ 58,780.98</td> </tr> <tr> <td><b>Phase 1 Total Contract Sum:</b></td> <td style="text-align: right;"><b>\$ 1,035,979.74</b></td> </tr> </table>	<b>Phase 1 (FY 2015-16)</b>		Hardware.....	\$ 618,747.12	Software.....	\$ 30,411.04	Hardware Maintenance (5 years).....	\$ 185,700.60	Software Maintenance (5 years).....	\$ 32,340.00	Professional Services .....	\$ 110,000.00	Sales Tax .....	\$ 58,780.98	<b>Phase 1 Total Contract Sum:</b>	<b>\$ 1,035,979.74</b>
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<p><b>Risk Analysis</b></p>	<p><b>RISK MITIGATION:</b></p> <p>The Chief Information Security Officer reviewed this request and did not identify any IT security or privacy issues.</p>																
<p><b>CIO Approval</b></p>	<p><b>PREPARED BY:</b></p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">   <hr/> <p>Sanmay Mukhopadhyay, Sr. Associate CIO</p> </div> <div style="text-align: center;"> <p>2/17/16</p> <hr/> <p>Date</p> </div> </div> <hr/> <p><b>APPROVED:</b></p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">   <hr/> <p>Richard Sanchez, Chief Information Officer</p> </div> <div style="text-align: center;"> <p>2/17/16</p> <hr/> <p>Date</p> </div> </div>																

Please contact the Office of the CIO (213.253.5600 or [info@cio.lacounty.gov](mailto:info@cio.lacounty.gov)) for questions concerning this CIO Analysis. This document is also available online at <http://ciointranet.lacounty.gov/>

## ATTACHMENT II

<b>Description</b>	<b>One Time Cost</b>
Hardware Subtotal	\$ 618,747.12
Software Subtotal	\$ 30,411.04
Hardware Maintenance (5 Years)	\$ 185,700.60
Software Maintenance and Support (5 Years)	\$ 32,340.00
Professional Services + Training	\$ 110,000.00
Sales Tax	\$ 58,780.98
<b><u>Grand Total</u></b>	<b>\$ <u>1,035,979.74</u></b>